

**FAIRCHILD POWER SUPPLY**

**MODEL 667II**

**(18 - 24V DC)**

**1B66711/368**

**INSTRUCTION MANUAL**

## MODEL 667II POWER SUPPLY

The MODEL 667II Power Supply is designed to deliver from 18 to 24V DC to power FAIRCHILD Integra I and Integra II series equipments. It has current capacity of 2 amperes.

This power supply features active filtering, short circuit and overload protection, and provides excellent regulation with extremely low ripple, as well as remote sensing. The voltage of the 667II is continually adjustable for any desired voltage from 12 to 30V.

The 667II is compact and mounts into a standard FAIRCHILD 662RM rack mounting, taking 5 $\frac{1}{4}$ " high by 6" wide of space. The unit is 10" deep.

### CIRCUIT DESCRIPTION

The 667II Power Supply is fed from 110V AC line. Stepdown transformer reduces the AC voltage to 27V, which is rectified and fed into an active filtering circuit. The filtering circuit consists of three transistors, a zener diode and a short circuit protection system.

When rectified, DC is fed into series regulation transistor 2N277. Voltage across the output of the power supply is sensed, amplified by 2N508 transistor, compared to a reference voltage provided by the zener, and applied to series regulator. An .11 ohm resistor in series with the output of the regulator transistor senses the current delivered to the load. Voltage drop across this resistor is fed into a short circuit protection network consisting of two series-connected diodes controlling a base of the transistor 2N1183. When current exceeds two amperes, diodes start conducting, cutting off the output voltage and, if short circuit occurs, clamps down voltage regulator for "0" volt output.

Remote sensing is accomplished by providing separate terminals which can be connected via separate wires to the load, which is located at some distance from the power supply, and therefore compensates for losses occurring in the power lines feeding this particular load.

### INSTALLATION

Recommended mounting for the 667II Power Supply is the 662RM rack mount. The power supply may also be mounted at the bottom of the equipment rack, or in any other fashion. The position of the power supply is not critical, but precaution should be exercised, however, to provide sufficient amount of ventilation for the unit when it is to be driven with a full

load. Also, the power supply should be located as far away as possible from low level circuits, and especially from low level input transformers.

#### PERFORMANCE SPECIFICATIONS

VOLTAGE	Continually variable from 12 to 30V.
RIPPLE	Less than .25 mv rms at full load. .1 mv no load
REGULATION	Better than .1% from full load to no load
CURRENT CARRYING CAPACITY	at 24V - 2 amps maximum at 18V - 2.2 amps maximum
SHORT CIRCUIT PROTECTION	Effective after current exceeds 2.2 amps
VOLTAGE REGULATION	1% maximum for line voltage variation from 90 to 120V at full load
PHYSICAL DIMENSIONS	6" wide x 5 1/4" high x 10" deep

#### MAINTENANCE

The MODEL 667II Power Supply requires no specific maintenance. However, period physical inspection of the components in the unit would be recommended, as well as tests for ripple and voltage. Particular attention should be paid to electrolytics and printed circuit board. Some components may age with time, and are subject to deterioration under high ambient temperatures (electrolytics and power resistors).

#### WARRANTY & SERVICE POLICY

See standard warranty policy attached to and forming part of this manual. To validate warranty, complete and return the warranty registration card provided. When returning any piece of FAIRCHILD equipment to the factory for service, a short description of the problem encountered should be enclosed with the shipment. If there is any question on this or any other FAIRCHILD professional product, please do not hesitate to contact the factory, FAIRCHILD SOUND EQUIPMENT CORPORATION, 10-40 45th Avenue, Long Island City, New York 11101 (212 Stillwell 4-6163).

#### SCHEMATIC

B96332

DO NOT SCALE DWG. WORK TO FIGURES.  
TOLERANCES - UNLESS OTHERWISE SPECIFIED  
DEC. DIMS. ± — FRAC. DIMS. ± — ANGULAR DIMS. ± —

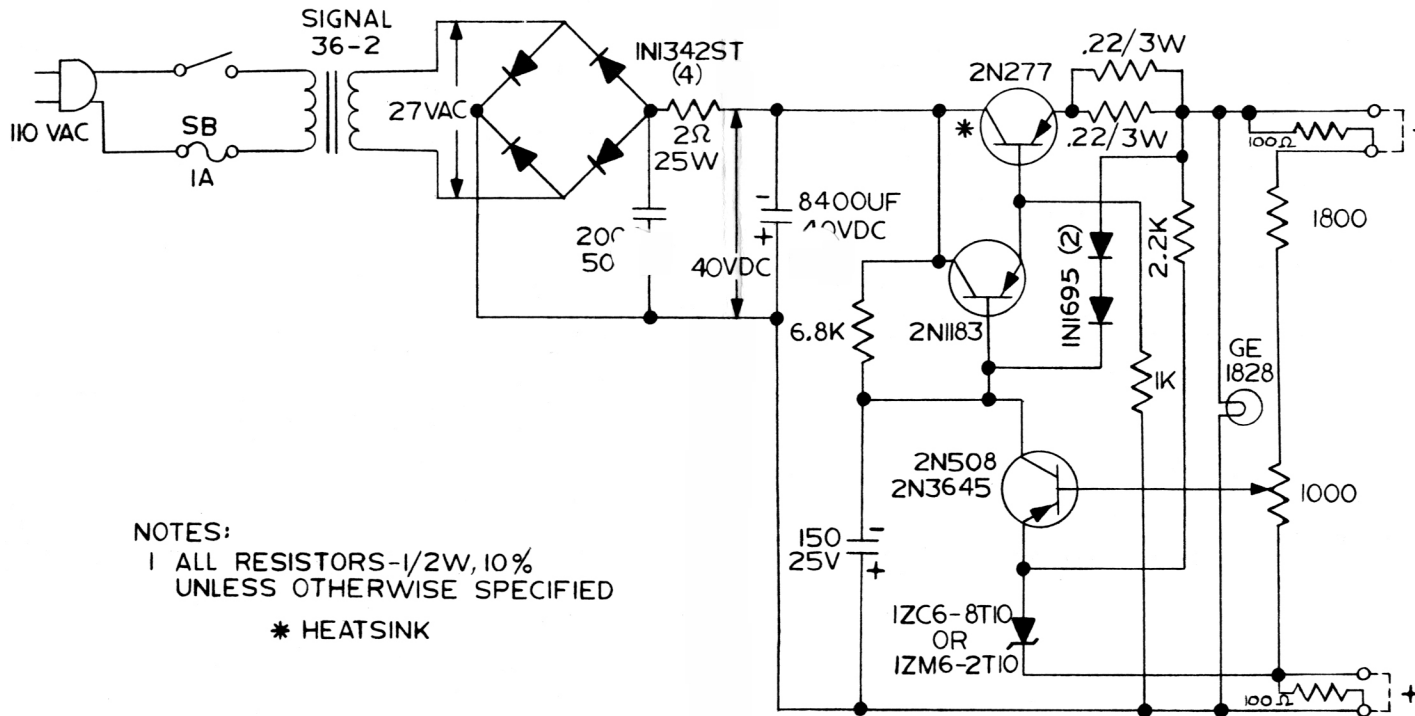
DRILL, PUNCH, COMMERCIAL STOCK  
SIZES AND MANUFACTURERS'  
TOLERANCES ARE NOT INCLUDED.

REMOVE ALL  
BURRS AND  
SHARP EDGES

NUMBER

**B-96332**

ISSUE: 1 1-17-68  
ISS. 2 9-17-68  
RESISTOR 2200  
CHANGED TO  
1800; CAP. 300  
CHANGED TO  
150 *CB*

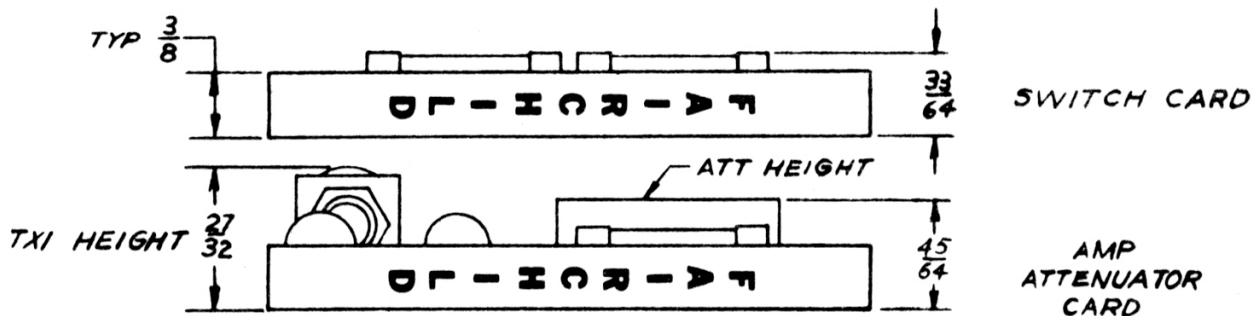
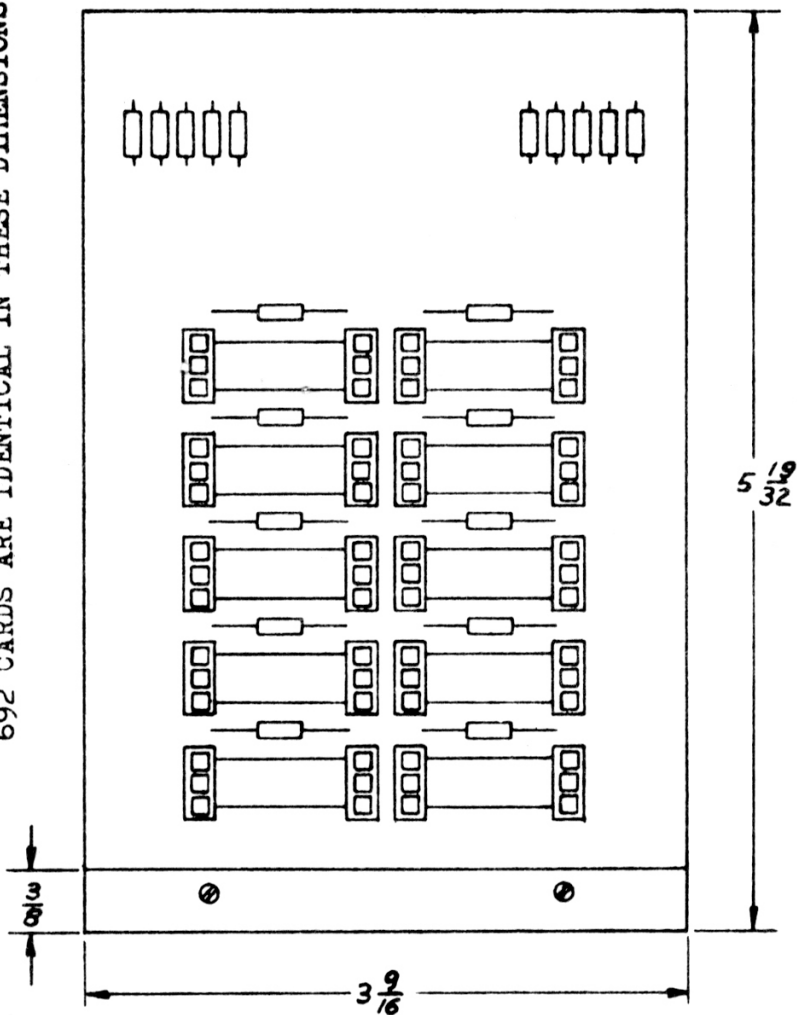


NOTES:  
1 ALL RESISTORS - 1/2W, 10%  
UNLESS OTHERWISE SPECIFIED  
\* HEATSINK

REQ	DESCRIPTION	NAME	DWG NUMBER	ITEM	NEXT ASSEMBLY
	MATERIAL	667/II POWER SUPPLY			
	HEAT TREATMENT				
	FINISH				
		FAIRCHILD RECORDING EQUIPMENT CORPORATION 10-40 45 AVE., L. I. C. I. N. Y.			
DRAWN BY	CHKD BY	DRFTG APP	SCALE	NUMBER	
MK.				<b>B-96332</b>	
ENG	PROJECT ENG	ENG APP			
		<i>W. J. G. G. G.</i>			

# INTEGRA II PC BOARD MOUNTING DIMENSIONS

AUDIO SWITCHER CARD USED AS AN  
 EXAMPLE FOR LENGTH & WIDTH. ALL  
 692 CARDS ARE IDENTICAL IN THESE DIMENSIONS.



A-96297